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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/731,637 | 12/07/2000 | Frank Cordiale | | 9974 |

7590 05/09/2002
Brian C. Kelly
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EXAMINER

JONES, JUDSON

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2834

DATE MAILED: 05/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,637

Applicant(s)

CORDIALE, FRANK

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 7-12 is/are rejected.
- 7) ☒ Claim(s) 3, 6 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gifford in view of Susliaev et al. Gifford discloses a prime mover comprising a cylinder block having multiple coils, a power source and a switch to control the flow of energy but does not disclose steel pistons. However, Susliaev et al. teaches using ferromagnetic pistons in column 4 lines 40-46 for the purpose of permitting the pistons to be attracted by electromagnets. Since Gifford and Susliaev et al. are both from the same field of endeavor, and since Gifford does not provide details on the material of his pistons except for the permanent magnet included in each piston, it would have been obvious for one of ordinary skill in the art to have utilized ferromagnetic (including steel) pistons in the device of Gifford.

In regard to claim 2, see Gifford column 3 lines 37-45.

In regard to claim 4, see Gifford figure 4 which shows a cylindrical framework having a cylindrical cross-section with a cylindrical shaped piston.

In regard to claim 5, see Gifford column 3 lines 19-24.

In regard to claim 8, see Gifford column 4 lines 59-64.

In regard to claims 9 and 10, see Gifford column 4 line 59 to column 5 line 6 and column 5 lines 49-63.

In regard to claim 11, see Gifford figure 1.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gifford in view of Susliaev et al. and Neff. Gifford as modified by Susliaev et al. discloses the prime mover and in column 5 lines 22-26 Gifford discusses the problem of heat generated by electromagnets. In column 3 lines 19-22 Gifford teaches making the cylinders from "high strength plastic, ceramic or aluminum" but does not provide any more details about the plastic to be used. However, in column 5 lines 53-62 Neff teaches making plastic motor parts from high-temperature plastic for structural integrity of the motor. Since Neff and Gifford as modified by Susliaev et al. are both from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to have utilized high temperature resistant polymer plastic in the cylinders of Gifford as modified by Susliaev et al. in order to improve the structural stability of the prime mover.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gifford as modified by Susliaev et al. in view of Patton. Gifford as modified by Susliaev et al. discloses the prime mover but does not disclose using the piston to operate a pump. However, Patton teaches in column 1 lines 60-68 using a prime mover to pump fluid for the purpose of powering a power take-off mechanism as described in column 4 lines 8-21. Since Patton and Gifford as modified by Susliaev et al. are both from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to have utilized the prime mover of Gifford as modified by Susliaev et al. as a fluid pump to drive a power take-off mechanism.

Allowable Subject Matter

Claims 3, 6 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base


Art Unit: 2834

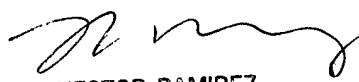
claim and any intervening claims. The prior art of record does not disclose or teach a spherical piston for a prime mover having coils that move a piston as recited in claim 3. The prior art of record does not disclose or teach a prime mover having coils that move a piston inside a brass cylinder as recited in claim 6. Gifford discloses a number of materials for cylinders in column 3 lines 19-24 but does not mention brass. The prior art of record does not disclose or teach a prime mover having a piston reciprocating in a cylinder based upon the alternate energization of coils where the piston exits the cylinder when an exit coil is not energized in one cycle as recited in claim 13.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHL 
April 1, 2002


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
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